

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claims 1-10 are pending in this application. By this Amendment, claims 1-5, 7, and 8 are amended. The amendments are made solely for purposes of clarification, and not related to patentability. No new matter is added. Claim 1 is the sole independent claim.

Applicants note with appreciation the Examiner's acknowledgement that certified copies of all priority documents have been received by the U.S.P.T.O.

Applicants also appreciate the Examiner's indication that the Information Disclosure Statement filed on March 28, 2006, has been considered.

Applicants also respectfully note the present action indicates that the drawings filed March 28, 2006 have been accepted by the Examiner.

Objections to the Specification

The disclosure is objected to because of informalities. By this amendment, the specification has been amended to obviate the objection. In particular, the recitation of "claim 1" has been removed in the specification.

Withdrawal of the objection is respectfully requested.

Objections of Drawings

The drawings are objected to under 37 C.F.R. 1.83(a). In particular, the Examiner indicated that the feature of "plug interface" (claim 6), the "second temperature sensor is arranged in the upper part of the door frame" (claim 7), and the

“change-over switch” (claim 9) must be shown or the features canceled from the claims. Applicants respectfully traverse this objection.

35 U.S.C. § 113 provides that an “applicant shall furnish a drawing where necessary for understanding the subject matter sought to be patented.” Accordingly, Applicants respectfully submit that the subject matter sought to be patented does not necessitate a drawing for understanding the invention. In addition, the features found in claims 6, 7, and 9 are merely alternative embodiments and not required in the drawings.

Therefore, Applicants respectfully assert that an amendment to the drawings to illustrate a “plug interface,” a “second temperature sensor arranged on the upper part of the door frame,” and a “change-over switch” are not necessary. Reconsideration and withdrawal of the objection to the drawings are respectfully requested.

Claim Rejections - 35 U.S.C. § 112

Claim 5 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants submit that “an experience curve” is a determination that is programmed into the system. For example, an experience curve may be a curve that has been carefully determined in, e.g., a climate chamber where the humidity and temperature of the air are may be accurately controlled. An experience curve may be typically determined by first subjecting the door to different combinations of humidity, indoor temperature and outdoor temperature, for each combination determining the most suitable level of heating to be applied to the door, and finally summarizing these

levels in a curve which is programmed into the system. In other word, the experience curve provides the unexpected effect of making the control system fully automated, such that the system may determine the level of heating to be applied to the door without relying on manually adjusted dials.

Accordingly, Applicants submit that the term “experience curve” is definite and clear to one of ordinary skilled in the art. Reconsideration and withdrawal of the objection to the drawings are respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 3, 4, 5, 7 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,778,689 (“Beatenbough”) and further in view of Japanese Publication No. 11-073552 (“Kobayashi”). Applicants respectfully traverse this rejection for the reasons discussed below.

In order establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the U.S. Supreme Court in *KSR Int’l Co. v. Teleflex, Inc.*¹ noted that the rejection must establish a reasoning that it would have been obvious for one of ordinary skill in the art to have combined the teachings of the cited document(s). One way to establish this would be to show “some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness” and “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”² In addition, the cited document(s), when combined or modified, must teach or suggest all of the claim limitations of the rejected claims.³

¹ 550 U.S. at 398, 82 USPQ2d at 1396 (2007).

² *Id.*

³ *In re Vaeck*, 947, F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants respectfully submit that the proposed combination of references does not meet these criteria. In particular, the rejection fails to demonstrate that one of ordinary skill in the art would have combined the teachings of the Beatenbough and the Kobayashi references in the manner used to reject the claims, and the applied references fail to teach and suggest all of the claim elements.

For example, in the outstanding Office Action, the rejection is based on an assertion that:

[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Beatenbough's invention to include a second temperature sensor located inside the storage space as taught by Kobayashi in order to monitor the temperature of the storage space and to regulate the amount of power supplied to the conductive layer which helps maintain a condensation free surface.⁴

Applicants respectfully submit, however, that if the proposed modification or combination of the prior art would change the *principle of operation* of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.⁵ Applicants respectfully submit that the proposed combination of the Beatenbough and the Kobayashi references would require a substantial reconstruction and redesign as well as a change in the basic principle under which the Beatenbough reference construction was designed to operate. For example, the Beatenbough reference discloses a system where readings from a temperature sensor and a moisture sensor, each arranged outside the storage space, are used for computing the dew point, and thereafter to use the dew point to determine the active width of each electrical pulse which is necessary in order to maintain the glass of the doors within the desired temperature range to prevent the formation of condensation [see col. 3 rows 35-40 and 45-50].

⁴ See Office Action mailed March 27, 2009, page 5, paragraph 1.

Also, the dew point, T_d , varies with the temperature, T , and the relative humidity, RH , of the air in accordance with the following well known expression:

$$T_d = b * f(T, RH) / (a - f(T, RH)),$$

wherein $f(T, RH) = \ln(RH/100) + aT/(b+T)$, $a=17,271$ and $b=237,7^{\circ}\text{C}$.

The Kobayashi reference, on the other hand, describes a system with two temperature sensors for determining the difference between the outdoor air temperature and the temperature inside the wending machine. When this difference exceeds a predetermined value, there is a risk of dewing and the control system initiates a heating of the door window. As such, there are no other sensors for measuring environmental parameters.

Hence, the above two systems are from two **completely different** technical fields, which present two self-sufficient methods for keeping a window free from condensation. One of the systems uses the temperature difference, and another uses the dew point, for calculating the level of heating to be provided to the door/window. As these documents present two completely different solutions to the same problem there is no way in which they may be combined with each other. One of ordinary skill in the art would appreciate that the respective way of computing the necessary heating effect is too different and would require substantial reconstruction. Therefore, it will be difficult to modify or redesign the system of the Beatenbough reference, without destroying the reference.

In addition, Applicants respectfully submit that “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination.”⁶ For example,

⁵ *In re Ratti*, 270 F.2d 810, 23 USPQ 349 (CCPA 1959).

⁶ *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

the Beatenbough reference discloses a pulse activation connected with heating elements, which is operative to deliver electrical pulses of preset duration and a variable active width (see col. 1, lines 60-64 of the Beatenbough reference). Accordingly, there is no mention or disclosure in the Beatenbough reference of regulating and adjusting itself to any surrounding humidity as taught by the claimed invention. Therefore, the rejection failed to articulate a proper rationale to support an obviousness rejection.

Further, even if, *arguendo*, the teachings of the Beatenbough and the Kobayashi references were to be combined, they would nonetheless fail to teach each and every element of the rejected claims. In particular, Applicants respectfully submit that the Beatenbough and the Kobayashi references, whether alone or in combination, fail to teach or suggest, *inter alia*, "a second temperature sensor in said cold-storage/freezer space on the side which is cold when using the cold-storage/freezer space, said second temperature sensor being connected to said control unit," as recited in claim 1.

In the outstanding Office Action, the Examiner allegedly asserted that the Kobayashi reference discloses "a temperature sensor to sense the temperature inside the storage space in order to determine the power supplied to heat a transparent window 4a" (see *Office Action*, pages 4 and 5). Applicants respectfully submit, however, that the Kobayashi reference fails to disclose the second temperature sensor because none of the sensor of Kobayashi can measure the environmental parameters. Therefore, because the proposed combination of the Beatenbough and the Kobayashi references, whether alone or in combination, fails to teach or suggest *all* of the elements of claim 1, no *prima facie* case of obviousness has been established.

In view of the above, Applicants respectfully submit that one of ordinary skill in the art would not have combined the teachings of the Beatenbough and the Kobayashi

references in the manner used to reject the claims, and that the proposed combination of the Beatenbough and the Kobayashi references fails to teach or suggest *all* of the elements of claim 1. Thus, no *prima facie* case of obviousness has been established. Accordingly, claim 1 is allowable over the Beatenbough and the Kobayashi references. Dependent claims 3, 4, 5, 7, and 10 depend from claim 1 and are allowable for at least the reasons that claim 1 is allowable. Therefore, Applicants respectfully requests that the rejection of claims 1, 3, 4, 5, 7, and 10 under 35 U.S.C. § 103(a) be favorable reconsidered and withdrawn.

Claims 2 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Beatenbough in view of Kobayashi and further in view of U.S. Patent No. 4,938,027 ("Midlang"). Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants respectfully submit that the Beatenbough and the Kobayashi references relied upon to reject claims 2 and 11, fail to provide the teachings, discussed above, that are missing from the Beatenbough and the Kobayashi references. Claims 2 and 11, depend, either directly or indirectly, from claim 1. Accordingly, the proposed combination of the Beatenbough and the Kobayashi references with the Midlang references fails to disclose or suggest all elements of the rejected claims for at least the reasons set forth above. Applicants respectfully submit that claims 2 and 11, are in condition for allowance, and respectfully request that the Examiner reconsider and withdraw the rejection.

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Beatenbough in view of Kobayashi and further in view of U.S. Patent No. 4,411,139 ("Bos"). Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants respectfully submit that the Beatenbough and the Kobayashi references relied upon to reject claim 8, fail to provide the teachings, discussed above, that are missing from the Beatenbough and the Kobayashi references. Claim 8, depends, either directly or indirectly, from claim 1. Accordingly, the proposed combination of the Beatenbough and the Kobayashi references with the Bos references fails to disclose or suggest all elements of the rejected claims for at least the reasons set forth above. Applicants respectfully submit that claim 8, is in condition for allowance, and respectfully request that the Examiner reconsider and withdraw the rejection.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Beatenbough in view of Kobayashi and further in view of U.S. Patent No. 4,127,765 ("Heaney"). Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants respectfully submit that the Beatenbough and the Kobayashi references relied upon to reject claim 9, fail to provide the teachings, discussed above, that are missing from the Beatenbough and the Kobayashi references. Claim 9, depends, either directly or indirectly, from claim 1. Accordingly, the proposed combination of the Beatenbough and the Kobayashi references with the Heaney references fails to disclose or suggest all elements of the rejected claims for at least the reasons set forth above. Applicants respectfully submit that claim 9, is in condition

for allowance, and respectfully request that the Examiner reconsider and withdraw the rejection.

CONCLUSION

In view of the above remarks and amendments, Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. Further, the above remarks demonstrate the failings of the outstanding rejections, and are sufficient to overcome the rejections. However, these remarks are not intended to, nor need they, comprehensively address each and every reason for the patentability of the claimed subject matter over the applied prior art. Accordingly, Applicants do not contend that the claims are patentable solely on the basis of the particular claim elements discussed above.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a three (3) months extension of time for filing a reply to the outstanding Office Action and submit the required \$1110.00 extension fee herewith.

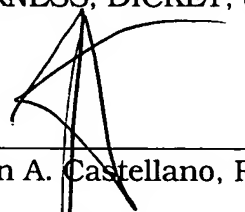
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned, at the telephone number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By



John A. Castellano, Reg. No. 35,094

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/DJC:clc